Abstract of the Disclosure:

[0055] Methods and apparatus for eddy current inspection are provided. Eddy current inspection is 5 used in a variety of industries to find defects and make measurements and inspections of various materials. Providing superwaves as the excitation current and/or voltage signal for eddy current inspection may produce higher intensity and lower signal-to-noise eddy 10 currents than in typical eddy current inspection. will result in faster and more accurate inspections. Eddy current inspection using superwaves, in accordance with the invention, may also enhance the ability to detect small defects in difficult to inspect materials 15 and configurations.